

CLAIM LISTING

1. (Currently Amended) A method for determining inhibitors of subunit interaction comprising:

providing a test sample comprising at least ~~a fragment of~~ a first viral polymerase subunit or fragment thereof and at least ~~a fragment of~~ a second viral polymerase subunit or fragment thereof, the ~~fragment of the first subunit or fragment thereof~~ and the ~~fragment of the second subunit or fragment thereof~~ capable of interacting ~~to form a dimer together~~ and the ~~fragment of the first or second subunit or fragment thereof~~ comprising a fluorescent label;

measuring fluorescence polarization of the test sample;

combining at least one test compound and the test sample to form a test mixture;

evaluating fluorescence polarization of the test mixture; and

comparing fluorescence polarization of the test mixture with fluorescence polarization of the test sample to determine if the at least one test compound has inhibited ~~disrupted~~ subunit interaction.

2. (Original) The method of claim 1 in which the first viral polymerase subunit or fragment thereof includes a peptide having SEQ ID No.: 1.

3. (Original) The method of claim 1 in which the second viral polymerase subunit or fragment thereof includes a peptide having SEQ ID No.:2.

4. (Original) The method of claim 1 wherein the at least one test compound includes a plurality of test compounds.

5. (Original) The method of claim 1 in which the fluorescent label comprises pentafluorescein-derivative Oregon Green 514.

6. (Original) The method of claim 1 in which the at least one test compound is a member of a combinatorial library.

7. (Original) The method of claim 6 in which remaining members of the library are sequentially tested in a plurality of test mixtures.

Claims 8 - 13 (Cancelled)

14. (Previously Presented) A method of testing compounds for inhibiting herpes simplex virus DNA polymerase, the method comprising:

providing a test sample comprising a peptide which is substantially homologous to an eighteen amino acid C-terminal fragment of catalytic unit of herpes simplex virus DNA polymerase and a functional fragment of processivity subunit of herpes simplex virus DNA polymerase, the C-terminal fragment of catalytic unit of herpes simplex virus DNA polymerase comprising a fluorescent label;

measuring fluorescence polarization of the test sample;

combining at least one test compound and test sample to form a test mixture; and

evaluating fluorescence polarization of the test mixture; and

comparing fluorescence polarization of the test mixture to fluorescence polarization of the test sample to determine level of inhibition of the herpes simplex virus DNA polymerase by the test compound by measuring fluorescence polarization of the test mixture.

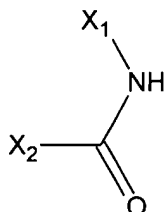
15. (Original) The method of claim 14 in which in which a decrease in fluorescence polarization of test mixture, when compared to fluorescence polarization of test sample, can be correlated to a decrease in DNA synthesis by herpes simplex virus SNA polymerase.

16. (Original) The method of claim 15 in which the C-terminal fragment comprises a peptide including SEQ ID NO.:1.

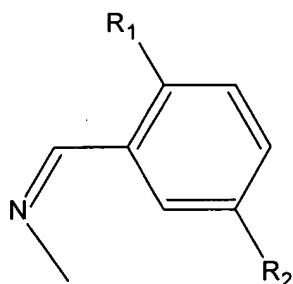
17. (Original) The method of claim 15 in which the functional fragment of the processivity subunit comprises a protein including SEQ ID NO.: 2.

18. (Original) The method of claim 15 in which the C-terminal fragment comprises a peptide including SEQ ID NO.:1 and the functional fragment of the processivity subunit comprising a protein including SEQ ID NO.: 2.

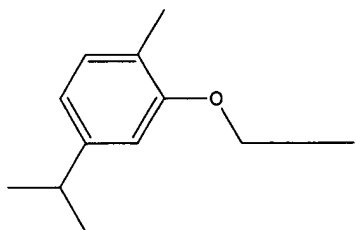
19. (New) The method of claim 1, wherein the test compound comprises the formula



or pharmaceutically suitable salt or solvate thereof, wherein X₁ is

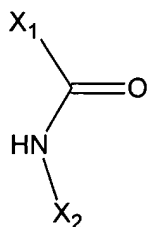


and X₂ is

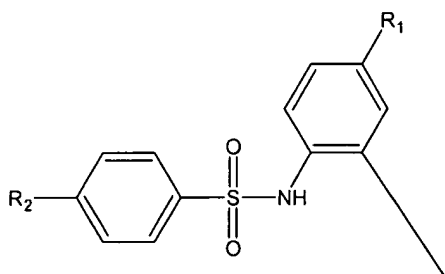


wherein each of R₁ and R₂ may be selected from the group consisting of: -NO₂, -NH₂, -OH, -COOH, -Cl, -Br, -I, and -O-X, wherein X is a saturated or unsaturated hydrocarbon including 1-8 carbon atoms.

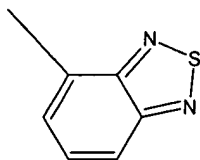
20. (New) The method of claim 1, wherein the test compound comprises the formula



or a pharmaceutically suitable salt or solvate thereof, wherein X₁ is



and X₂ is



wherein each of R₁ and R₂ may be selected from the group consisting of: -NO₂, -NH₂, -OH, -COOH, -Cl, -Br, -I, and -O-X, wherein X is a saturated or unsaturated hydrocarbon including 1-8 carbon atoms.